



The

GARzette



The Official Newsletter of the Gwinnett Amateur Radio Society

September 2024 <http://www.gars.org/> Volume 51, Issue 9

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www.GARS.org

**Don't forget to support our
advertisers at the back of the
GARzette.**



**GARS January Exhibition of the
Technical aspects of Amateur Radio
Held at the Gwinnett County Fairgrounds**

The next TechFest is January 11, 2025

**GARS Meeting: Simple Get on the Air Antennas for HF, VHF, and UHF – Dallas N4DDM
Tuesday September 10, 2024 at 7:00 PM**



President's Message

From the President...



Happy September to everyone at GARS.

If you haven't already heard, our vice president Alex AK4AM recently launched a club survey to help provide insight into club interests, activities, and how we can continually improve to make sure the club is thriving. The survey was sent out via the Groups.io page and can also be accessed via [here](#). Please take a few minutes to help provide this valuable feedback.

If you know anyone interested in getting into amateur radio and getting their technician, GARS will be holding a Technician HamCram on September 28th and 29th. As always, our HamCrams have an amazing record of

success with training and passing new operators. Please see the GARS website for more information and to pre-register for the course.

We are under two months away from the Stone Mountain HamFest taking place on November 2nd and 3rd. The life blood of the HamFest running smoothly are volunteers that graciously give of their time to make it a success. GARS places an important part in helping with the event from helping with setup, keeping order with parking, ticket sales, and much more. Please be on the look for a volunteer sign up form and please consider signing up for a slot or two if you can. All the help is greatly appreciated.

73,

Kevin W4KIB
Club President

GARS Repeaters and Other Communications

<u>2 Meter Repeaters</u> 147.075(+) MHz Tone 82.5 147.255(+) MHz Tone 107.2 <u>1.25 Meter Repeater</u> 224.580(-) MHz Tone 100.0, 1.6 MHz Offset <u>70 Cm Repeaters</u> 444.525(+) MHz Tone 82.5 442.100(+) MHz Tone 100 442.325(+) MHz Tone 100	<u>6 Meter Repeater</u> 53.110 (-1 MHz) No Tone (Offline for Maintenance) Other Resources: <u>APRS</u> 144.390 -- 1200 Baud W4GR <u>D-STAR (WD4STR)</u> 145.060 + (1.4 MHz) 440.550 + (5 MHz)	6M Currently down 147.075 Operational in Snellville 147.255 Operational in Snellville 224.580 Operational in Grayson 442.100 Operational at Goshen Springs Rd, Norcross 442.325 Operational in Buford 444.525 Operational in Snellville Link remote receivers being added
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Notable Web Links

Ham Radio Glossary: <https://noji.com/hamradio/glossary.php> a very comprehensive listing provided by Noji Ratzlaff KNØJI. On his site there is also a lot of information about getting started in ham radio.

Need Help – Let GARS Elmers answer your questions

Send an email to elmers@gars.org with the subject listing the area (like Antennas, Repeaters, Digital, DMR etc.) of your query to get to GARS Elmer volunteers.

About the GARzette

The *GARzette* is the official monthly newsletter of the Gwinnett Amateur Radio Society, serving its members and other persons interested in the advancement of the Amateur Radio art.

Original articles, art, and photos are invited and encouraged. Previously copyrighted submissions cannot be accepted for reprinting unless permission from the appropriate publisher is provided in writing along with the information being submitted. If reprints are from publications allowing their unrestricted use, please include a copy of the printed permission contained in the publication.

If possible, bring your articles to the monthly meeting in Microsoft Word or rich text (.rtf) or text or HTML format or by e-mail to editor@gars.org. Artwork can be accepted in most any graphics format and can be submitted via e-mail to the same address. Alternate means of submittal can be arranged when necessary.

In keeping with the Amateur Radio spirit, permission is hereby granted for the reproduction of The *GARzette* articles by other Amateur Radio club newsletters provided that proper credit is given to the individual author and *The GARzette*.

The GARzette is published each month with the assistance of Karen KI4HPP and Kyle W4KDA who print copies for distribution at meetings, etc. and Dave Bruse, W4DTR, who distributes the newsletter electronically.

Deadline for submissions is the 28th of each month for inclusion in the following month's issue.

For additional information view our Website at: <http://www.gars.org> [PS— Articles to publish in the *GARzette*, either written by GARS

members or published elsewhere, are always welcome. —Ed.]

Newsletter Email: editor@gars.org Editor: Bob Hoffmann, K4CQO

GARS Personalized Mugs for sale – Bits Print and Press



**Jolie
Dellaneve-
Brown,
KO4AHI**



mailto:bitsprintandpress@gmail.com

GARS Meetings & Workshops

GARS Meetings and Workshops are held in-person at the EAA 690 Hangar, 690 Airport Rd, Lawrenceville, GA 30046.

Meetings and Workshops are OPEN to all, feel free to share your invite with others.

Zoom login info will be posted to <http://www.gars.org> prior to the meeting.

GARS Meetings Schedule (second Tuesday @ 7:00 PM): (these are the presentations)

- September 10 - Simple Get on the Air Antennas for HF, VHF, and UHF – Dallas N4DDM
- October 8 - GARS Show-n-Tell, Home Brew/Favorite Projects
- November 12 - Modulation - Steve Back WB4OGY
- December 7 – GARS Holiday Party and GARS Ham of the Year Announcement

Workshop Schedule (third Tuesday @ 7:00 PM): (these are the Hands-on Workshops)

- September 17 - Get on the Air Antennas for HF, VHF, and UHF - Dallas Mellichamp N4DDM
- October 15 - GARS Show-n-Tell, Home Brew/Favorite Projects
- November 19 - Modulation - Steve Back WB4OGY
- December – No workshop in December

GARS Meeting – September 10, 2024 Simple Get on the Air Antennas for HF, VHF, and UHF

Simple Get on the Air Antennas for HF, VHF, and UHF – Dallas N4DDM

Dallas will go over some basic antennas for HF, VHF, and UHF that you can plan, build, and put up in a few days even if you live in an HOA (Home Owners Association aka Horribly Overbearing Autocrats).

GARS Workshop – September 17, 2024

If you have questions about how to plan or build your antenna, bring what you have to the Workshop and we will help you. Bring photos of your attic, backyard, and anything that can act as an antenna support. We can use Google Satellite View to help with antenna orientation.

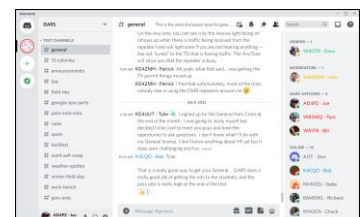
Feel free to bring any ham related questions you have including equipment setup and usage. We typically have 5 or more Elmers at each Workshop.

GARS would like to thank Bob Hoffmann, K4CQO, for providing an introduction to DMR and what can be done with a DMR QSO.



Bob Hoffmann, K4CQO
[Digital Net on TG 3113 Manager](#)

Don't forget about our Discord utility for GARS announcements, news, activity spotting and more. See <http://www.gars.org> top of the home page. This is a sample of Discord. →



GARS Happenings

20 Years ago in the September 2004 GARzette:

- The GARS newsletter (GARzette) is not available for July 2004. However, all available GARzettes from 1994 can be found and browsed for your enjoyment from the GARS website.

You can always browse the GARzette archive at <http://www.gars.org/newsletters>. 73, Bob, K4CQO, GARzette Editor

GARS
GARzette

[Health and Wellbeing](#) – Sandy Jackson, KJ4DRO

Look for this resource on [Email](https://gars.org/contact/) (<https://gars.org/contact/>) and use it as a means to convey information about a GARS family member or Silent Key notification.

Net Managers Corner

Monday Night 2 Meter “Want, Swap, Sell, and Information Net”

GARS NEEDS MEMBERS TO SERVE AS NET CONTROL STATIONS!

GARS is a great Amateur Radio service club with the membership and awards to prove it. Our club is very busy and active, and we use the Monday night net to get timely information out to our members. Weekly participation is needed to make our net function well. There is only a small group of very dedicated people who make the net happen each week, and we need more members to volunteer to serve as Net Control Stations (NCS) on a rotating basis.

Out of almost 300 members, there are only five operators who serve as the NCS for the GARS net every Monday night. In no particular order, they are:

Ray – N4GYN David – KA4KKF Kevin – W4KIB Bill - WD4AMC Chuck – KK4TKJ

As GARS Net Manager (Chuck KK4TKJ), I would like to have more volunteers to fill NCS positions. I do plan and post the schedule months in advance. Any conditions will be accommodated that you as a rotating NCS need to place on the scheduling of your duties. If your plans change, I can make adjustments for the schedule to work, and I will make those changes happen as soon as I am notified of a problem. As Net Manager, I also send out reminders each week to let the NCS scheduled know he or she is NCS for the next Monday night net. In short, serving as a rotating NCS is a small duty but a great contribution to the club. The “Want, Swap, Sell Information Net” begins promptly at 19:30 every Monday night and runs about 30 minutes. As a scheduled NCS, you will request the assistance of a volunteer alternate NCS each time you have Net Control. Your simple duties will be to tune in to the GARS repeater, read the script, take a few notes and forward the information to me for record keeping.

Please lend a hand and contact (Chuck) via Email ([Click Here to Email our Net Manager](#)) to help support the effort that makes GARS the great club that it is. See you on the Nets!

Fridays on 440 Net

The “**Fridays on 440 Net**” starts at 8:30pm on the 2nd and 4th Friday of the month on the 442.100 repeater. The general theme of the net will be a casual ragchew-style net with various, rotating topics of the night throughout its run. This net is also looking for additional NCS from the GARS members.

Contact Alex Kowalchuk, AK4AM or use our Net contact facility ([Click Here to Email our Net Manager](#)).

GARS Request for Volunteers

The GARS organization thrives on providing ham related events and also helping out communities with communication and organization help. In order to do these things, GARS has a group of very talented members to organize and put together groups of GARS members to get the job done.

As with most organizations, GARS has a small number of members doing the lion's share of the work. As an organization, GARS has Officers, Managers and Committee Charimen to get the work done. These members are all volunteers and many could use help.

Other GARS events can also use a group to help make the tasks easier and better for the members. Every member has experience they can put to work to make sure GARS continues to provide the organization and events the members love. As an example, the GARS meeting's video and presentation posts are all done by a single person. The GARzette is all done by myself and while editing may be a single person job, soliciting articles or additional advertising support can be a group effort.

If you really like the events (including meeting presentations and workshops) let on of the GARS Officers or Committee Chairmen know and how you can help. The Committee Charimen are listed in the GARzette and email access to them can be found on the [GARS.org website](https://www.gars.org).

GARS Survey

With a radio club of over 350 Members, I'm interested in keeping GARS current and thriving in today's ever-changing world.

I ask you to please take the time to complete our Gwinnett Amateur Radio Society 2024 Member Survey. It's only 10 questions and contains a few comment boxes for your added input. All written responses will be kept confidential.

A Google account is required to begin the survey for respondent verification. If you encounter any difficulty, please let me know.

Survey Link:

<https://forms.gle/GtKttAR1h5sLEwZ27>

Thank you for your time and 73,

Alex Kowalchuk, AK4AM
GARS Vice President
VE Team Member

Upcoming GARS Technician HamCram

GARS TECHNICIAN LICENSE HAM CRAM CLASS



WHEN: Saturday, September 28th, and Sunday September 29th, 8:00 am to 4:00 pm each day, exams start at 4:00 pm Sunday (this is a CLOSED exam session, only open to registered students of the class).

WHERE: EAA 690 Hangar, Gwinnett County Airport – Briscoe Field, [690 Airport Rd, Lawrenceville, GA 30046](https://www.google.com/maps/place/690+Airport+Rd,+Lawrenceville,+GA+30046)

MORE INFO: To register for our 2-day HamCram Class, use our registration form below. Pre-registration is REQUIRED. No Walk-ins accepted. This fee is non-refundable. Our \$25 fee covers the class and lunch both days, and the exam fee for the exam given Sunday at 4:00 pm. Lunch will be brought in to save time.

We will use the [Ham Radio School Technician License Study Guide](#) for this class. You can purchase the study guide locally at Ham Radio Outlet in Doraville, or purchase the book online at HamRadioSchool.com. We encourage you to at least look over the material in a study book and take some practice tests. We will go over every question in the question pool during the class, but remember that the test will only be 35 multiple choice questions. If you get 26 out of the 35 questions correct, you will pass the test. We suggest that you take some practice tests prior to the class to familiarize yourself with the question format and some of the material. Go to [our exam page for sample online tests towards the bottom](#).

QUESTIONS: Questions about the class or the exam session, use our online form — [click here](#) to email the instructors.

REGISTRATION: Use the online form on the GARS homepage; <https://www.gars.org/gars/>

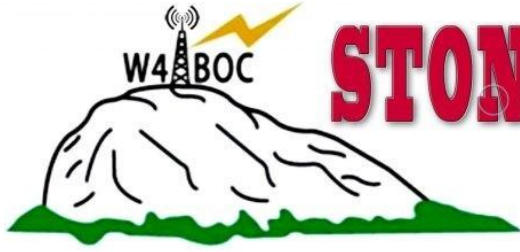
Georgia QSO Party

The [GA QSO Party Club Scores](#) have been posted and GARS came in 51st with a score of 4495. Some may recall that GARS and Gwinnett ARES had a combined GA QSO Party and ARES Deployment Day at Little Mulberry Park on April 13th. We operated for 2-1/2 hours and made 155 QSOs.

GARS sponsors a [Georgia QSO Party Plaque](#). The Georgia Single-Op Rover Phone winner was K4O (W4RZ), Kory Oldham of Franklin, GA.



Upcoming Hamfest



STONE MOUNTAIN HAMFEST

and ARRL



State Convention

November 2nd & 3rd - Sat/Sun
Gwinnett County Fair Grounds
Lawrenceville, GA 30045

[General Admission - Davis Rd at Plantation Blvd](#)

Forums Posted:

- Topics, Presenters, and Synopses have been posted and most of the timeslots and rooms are locked in.
- We are still seeking Guest Speakers to fill the few open time slots.
- Review the current list; [Stone Mountain Hamfest Forums](#)
- Reply to me directly at forums@stonemountainhamfest.com to volunteer or ask questions about being a Guest Speaker, or a Workshop/Build-A-Thon Elmer.

The Ticket Booth Is Open:

- [Advanced Ticket Sales, Adults \\$8.00 each](#)
- At The Gate Prices, Adults \$10.00 each
- 16 and under, FREE
- [Tailgate Spaces, \\$15.00 each](#)
- All credit card transactions are done through PayPal

North Fulton Amateur Radio League - CW Oscillator Kits

- NFARL will have plenty of Elmers to help folks build CW Oscillators. More details will be provided as we get closer to the HamFest.

HamFest Links:

- [Stone Mountain HamFest](#)
- [Stone Mountain HamFest Ticket Booth.](#)
- [Stone Mountain HamFest Forums](#)
- [Stone Mountain HamFest Fleamarket](#)

Ham Radio Exams - Both Days:

- Saturday 1:00 - 3:00 PM.
- Sunday 9:30 - 11:30 AM.
- Exam fee; \$14.00 Cash Only.
- Preregistration is highly recommended, youth under 13 MUST preregister.
- More info here; <https://stonemountainhamfest.com/index.php/ve-testing/>

2024 Prizes:

- We are working on the list of prizes.

Vintage Amateur Radio

de Bill Shadid, W9MXQ



I have run into a few issues with my collection of Drake radios in the past few weeks. One of them has netted some information worthy of sharing. Another one is destined to reach these pages in the future.

R. L. Drake Company amateur radio products range from just after World War II with Low Pass Filters and other accessories¹. They continue as a company to this day in non-amateur radio fields. Their last amateur radio related product ended with the last R-8B General Coverage Receiver in 2005².

For most of us enjoying the use of Drake equipment today, the time of actual receivers, transmitters, and transceivers dates from the introduction of the Drake 1-A Receiver in 1957. This tiny receiver (by the standards of the day) was a revolution at the time with its performance equaling or surpassing the heavy radios of the day.

Just over 18-pounds in a day with its Collins competition (by performance), a 75A-4 Receiver, weighed twice that². To be sure, Drake only beat its main competitor by a year – the 20-pound Collins 75S-1 was introduced the very next year.

Simple issues certainly predominate in our old favorite classic radios. This is true even with well-designed and built radios as they become older and older. As time has shown, even old Drake Receivers, Transmitters, and Transceivers from the 1950's can easily be in use today. Some still possess competitive operating specifications that allow them to be effective players on today's bands. Even though my main station³ is up to date and a top performer, I still enjoy using my several Drake separate receiver and transmitter and transceiver setups.

In this article we are going to talk about tips and modifications to the Drake TR-4 Transceiver (which includes the TR-4, TR-4C, TR-4CW, and TR-4CW-RIT).

Before we start, let's review the details of the several versions of the TR-4 over the years. These radios had the same basic features throughout their long run but had five noticeable versions over that time – but new features were added as time went along.

1. The early TR-4 was the basic radio that lasted through all versions. It was a significant upgrade from the previous, but every similar concept, TR-3 Transceiver. The TR-4 introduced internal accommodation of an external receiver (with connectors to supply muting and antenna feed to the remote radio).
2. The late TR-4 added a front panel switch and internal socketing for including the new 34-PNB Noise Blanker. (Early TR-4's and the previous TR-3 model could be adapted to accept a hard wired 34-NB Noise Blanker.
3. The TR-4C model changed the dial mechanism readout to one similar to the updated design used on the new (at the time) R-4C Receiver.
4. The TR-4CW model added a selectable 500Hz CW filter that could be engaged when the radio was in CW mode.
5. The TR-4CW-RIT model added RIT (Receiver Incremental Tuning) to the front panel. This was a major change in the front panel with the RIT control replacing the Noise Blanker On-Off rotary switch. Engaging the Noise Blanker or the RIT feature were accommodated with individual push-push buttons on the front panel.

Over time, as an owner and user of the TR-3, early and late TR-4, TR-4C, and TR-4CW-RIT models,

most of the R-4(x) and T-4X(x) models, the TR5, and the TR7(x) versions, I can say that to my ear, no Drake sounds better than the TR-3 and TR-4 series. I know that is a very subjective comment. At the same time, I also will say that the R-4C/T-4XC and the TR7(x) radios are better performers in difficult band conditions. They were better armed with QRM and Noise abatement tools. Other than an optional Noise Blanker and narrow CW filter in the TR-4CW and TR-4CW-RIT models, the TR-3/TR-4 series of radios had no features for controlling interference⁴.

The TR-4(x) series of transceivers were extremely popular over the years and had many user-designed convenience updates published in the various radio magazines and by discussions among users. One feature of the TR-4 radios was their ability to accommodate a separate receiver and thereby offer some way to offset receive and transmit frequency as well as working with a separate receiver (such as a Drake or a different brand⁵). Drake TR-3 and TR-4(x) radios had a different conversion scheme than any other Drake radio so the external receiver, even if a Drake model, could not be used in transceive with the transceiver. They two always had to be separately controlled.

Drake had some unique ideas about items such as microphone and key connections, VOX adjustments, etc. Instead of being on the front or rear panel, they were on the sides of the radio. So, to have the transceiver sitting next to another radio or speaker, one had to use right angle connectors on external microphones and keys. Accessing VOX and S-Meter Zero potentiometers could be a real problem in a station setup. Most such controls were on the right side of the radio, as shown here: (All TR-4 Versions are identical as to side controls and connectors.)

(Special Note: As you proceed here, watch for pictures showing side lettering, in white, on the TR-4 cabinets. I have found some variances in the exact nomenclature used. Is this difference from the Drake factory or changed later by some highly skilled cabinet re-painters of Drake cabinets? The factory that painted Drake cabinets is well known to me and I actually worked with them in my professional career with another manufacturer. They no longer do this re-finish work. Another source for this work is a very accomplished service provider for repairing Drake products. He provides not only electronic repair and alignment but also does re-painting that rivals or exceeds original Drake standards. Contact me for more details – W9MXQ@TWC.com – as I did not contact him for permission to use his name for this article.}



Drake TR-4 Transceiver

Right Side View - Front Panel is to the Left

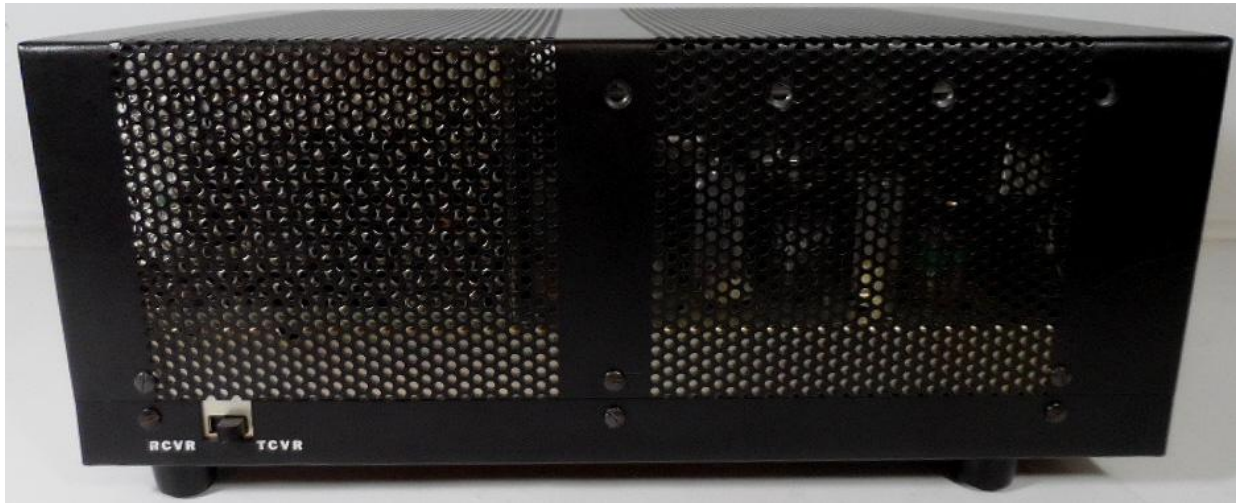
(All TR-4 Versions are Identical for Side Controls and Connectors)

W9MXQ

The mounting on the right side for the headphone jack must have been particularly inconvenient for many operators. If other users are like me, they frequently connect then disconnect the headphones in exchange for using the speaker. In many cases, users of early TR-4's would actually drill a hole in the lower right-hand corner of the front panel and install a phone jack for better convenience. The late TR-4's used that position for a Noise Blanker switch but early TR-4's (also TR-3's) are often seen for sale

with a phone jack installed. This may be convenient but is rarely done well and can severely detract from the value of the radio to a collector. If it is done well and it does not bother you, it is an effective way to get a decent price on an otherwise nice TR-3 or TR-4.

Now, for the subject of this article, check the other side of the TR-4 (any version) Transceiver:



Drake TR-4 Transceiver

Left Side View - Front Panel is to the Right

(All TR-4 Versions are Identical for Side Controls and Connectors)

W9MXQ TR-4

The Left Side View is the subject of this commentary. Note the slide switch (S4). When the switch is in the TCVR position, the radio will receive and transmit with its internal receiver. When the switch is in the RCVR (or EXT REC) position, the radio will receive with the external receiver and transmit with the internal (TR-4) transmitter. The external receiver does not transceive with the transceiver – the frequency of the two units is always controlled internally to the respective device. (Note that some TR-4's use the term RCVR and some use EXT REC – they mean the same thing.)

This arrangement is very inconvenient to say the least. There is no way to zero beat⁶ the internal TR-4 Transceiver and the external receiver.

In addition to the inconvenience, there is another issue with this switch that is more an issue with today's occasional user/collector. The switch itself is problematic:

1. This is a slide switch, and such devices have a limited length of service life. Here are two pointers if the switch seems not to do its assigned function:
 - a. Clean the Switch by carefully spraying a small amount (emphasis on "small") of DeoxIT™ D5 Contact Cleaner or CRC QD™ Electronic Cleaner⁷ followed by moving the switch back and forth, numerous times.
 - b. Check the switch and if you find it defective, replace it. The original is riveted in place. Those rivets must be drilled out to remove the switch. Replace the rivets with #4-40 pan head screws, a lock washer, and #4 hex nuts.
2. Once cleaned or replaced, the switch is at best inconvenient or near impossible to access in a typical radio setup. Think of it sitting in its operating position and needing to access the very lower back of the left side to reach the switch every time you want to switch from internal to external receiver.

This switch issue is best described in the TR-4 Mods and Tech document⁸ as developed by Wayne Montague, VE3EFJ, when he quoted, Tom Taylor, N7TM, commenting on the External [Receiver] Switch, "The switch on the side of the TR4 allows for an external [receiver] to be connected. Whenever

you move the transceiver, the switch moves to external by mysterious cosmic forces. You connect the antenna and wonder why the receiver is dead. To prevent this, you can lock the switch by placing a 4-40 nut in the exposed slot where the tab slides back and forth. Cover the nut with some tape to prevent it from coming loose.”



The troublesome Switch. Set in EXT REC (or RCVR) Position. This switch can be slipped accidentally to a mid-position with limited connectivity – causing receiver attenuation.

W9MXQ TR-4CW-RIT

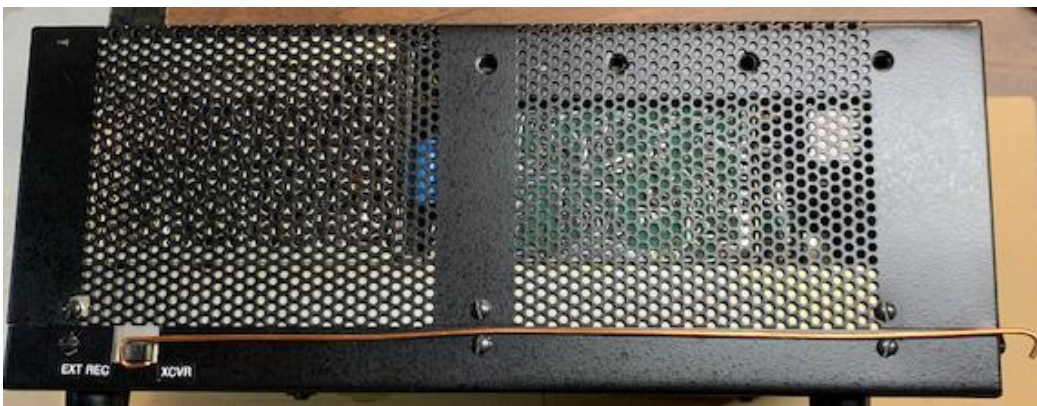


The troublesome Switch can be locked in one desired position by inserting a #4-40 hex nut, as shown. The nut can be held in place with tape (not shown here).

W9MXQ TR-4CW-RIT

It is worse than the comments from N7TM, however. As mentioned at the left, above, often during handling of the radio, the switch is accidentally moved to some odd position in between the two selections causing the radio to receive as if an attenuator has been introduced into the antenna line. This triggers endless troubleshooting until the problem is found! If you are me, then you are mystified for some period before thinking to check that annoying switch!

Many years ago, one of the amateur radio publications presented a suggested alternative for the designed-in inconvenience of that switch. I have searched for a long time for this article⁹ but cannot find it. While I am not a candidate to install it on my TR-4 or TR-4CW-RIT, you may find it an innovative idea with application in your installation.



Remote RCRV/EXT REC / XCVR Switch Actuator

W9MXQ TR-4CW-RIT

The above is simply a length of 12-gauge copper wire affixed to the switch and extending to a hook that can be pulled or pushed to make the selection without reaching to the back of the radio. Some fabricated brackets mounted to the lower row of cabinet screws can be used to keep the wire in alignment. The original author of this idea used piano wire and drilled a hole through the handle of the slide switch to hold the wire at the switch end. He used wire solder lugs, reformed for the purpose, to

support and guide the wire at the middle and front, lower cabinet mounting screws. I did that long forgotten ham's modification to my first TR-4 Transceiver, in the past. The above is not mounted and is shown only as an illustration of what can be done.

I collect these short stories on the ongoing collecting and restoring of Vintage Ham Radio Equipment. Occasionally, it is nice to share a bit of the experience. This is an ongoing process!!

I appreciate that you read my articles. Remember that I am open to questions and comments anytime at my email address, W9MXQ@TWC.com.

A special note of thanks to my proofreader, Bob Bailey, W9DYQ. As I have often said, Bob is a lot more than a proofreader as he often adds commentary that makes it into the article. Bob and I work to collect and restore many examples of Collins, Drake, Hallicrafters, National, RME, Swan/Cubic, Ten-Tec, and some of the Japanese products of historic and/or personal importance.

Notes and Comments:

¹ Wikipedia: <https://www.wikipedia.com>

² RigPix: <https://www.RigPix.com>

³ My main station includes a Yaesu FTdx-101MP which is currently the top-rated receiver performance radios available to radio amateurs. I reference Rob Sherwood's industry recognized measurements that are available at <https://www.sherweng.com/table.html>. Despite this, I am still inclined in casual operating to use my vintage Drake, Hallicrafters, Collins, Swan, or National equipment. But that is just me!!

⁴ The Drake TR5 was almost identical in features to the TR-4CW-RIT. As such, it offered an optional Noise Blanker and an optional filter slot. The filter slot on the TR5 could accommodate any one of the various filter options available for the TR7(x) series Transceivers. The TR5 had only one optional filter slot.

⁵ The separate receiver idea was accommodated also in the TR-3 by an external circuit that could be fabricated by the user. This is covered in the TR-3 Instruction Manual.

⁶ "Zero Beat" is a term meaning to put the separate receiver on the same operating frequency. This term, not so common in today's transceivers, comes from a time when receivers and transmitters operated separate from each other.

⁷ Available from a local commercial hardware dealer or from Amazon (<https://www.amazon.com>). DeoxIT D5 is available from Radio Shack™ stores or from (<https://www.radioshack.com>).

⁸ This is a part of the document, "Drake Mods – TR3 to the TR7," as edited by VE3EFJ. The comments shown in the text is in Section 9.2 of this document. If you have trouble finding it on the internet in a search, contact me at W9MXQ@TWC.com. All rights to this document belong to VE3EFJ and to contributors that he mentions therein.

⁹ If you can identify this author and where you saw his article on this front accessible switch, please let me know – W9MXQ@TWC.com

W9MXQ

GARS Membership

New Members in August

Bill Tyson (KQ4UTL)
Dixie Tyson

New Members: 2

**Total Members as of
September 1, 2024
348**

Join GARS members for our:

- weekly lunch bunch at 11:30 AM most Fridays
- weekly breakfast gathering at 8:00 AM most Saturdays



Friday weekly gatherings are held at the [Chilli's](#) at:

[947 Lawrenceville Suwanee Rd
Lawrenceville, GA 30043](#)

Saturday weekly gatherings are held at the [Cracker Barrel](#) at:

[75 Celebration Dr
Suwanee, GA 30024](#)

Birthdays in September

Karen Albritton (KI4HPP)
 Mary Bachner (KE4MFZ)
 Sherryl Bailey (N3MIU)
 Tina Bearden
 Tim Blitch (N4EEE)
 Jackson Britt (KM4PTV)
 Lynn Crowley (KJ4RTE)
 Ben Cullinan (KN4ZEX)
 Michael Curd (KO4TN)
 Russell Dickerson (KN4HAE)
 James Drumm (N2FOF)
 Roger Gibson (WB4T)
 Adolfo Guzman (KQ4RMQ)
 John Harris (KC4JVJ)
 Fred Hoefler (W3TLC)
 Anita Jassen
 Richard Kitz (KM4SWL)
 Alex Kowalchuk (AK4AM)
 Roinell Lewis (K4RNL)
 Maria Lewis
 Charles Mcelhannon (KM4QVI)
 Chris Ritchey (W4CJN)
 John Stockinger (KC4RFK)
 Richard Waigand (K4KME)
 Tim Weikert (KC7DCW)
 Carter Wood (AG4LK)

GARS MEMBERSHIP

Your current GARS membership status is shown in the monthly newsletter e-mail towards the bottom of the message. To become a GARS member, or to renew your GARS membership, please visit our website – <http://www.gars.org>. To make changes to your GARS membership (moved, new e-mail address, new phone number, etc.), please contact the Membership Chair at [Email](mailto:membership@gars.org) (<https://gars.org/contact/>) with any changes to your Membership information.

Membership Chair: Karen Albritton, KI4HPP **Committee Members:** Dave Bruse, W4DTR

ARRL MEMBERSHIP

To update your ARRL membership information, please visit their website - <http://www.arrl.org>.

MAINTAIN YOUR LICENSE

You can update your Amateur Radio license information with the FCC at their website for free - <https://www.fcc.gov/wireless/universal-licensing-system>. License renewal is subject to the \$35 FCC fee.



Donating to GARS

Your GARS donation can be used for a certain purpose by donating to one of these funds:

- GARS SK Memorial Fund for Education (to remember and honor Silent Keys);
- GARS Scholarship Fund (Administered by the ARRL for awarding scholarships);
- GARS General Fund (any club purpose).

GARS has joined these rewards programs (a portion of every purchase you make through these merchants may be donated to GARS):

- Kroger Community Rewards program.

For more information on how to sign up for these rewards programs, or to donate to GARS, visit

<http://gars.org/gars/donations-to-the-club>

GARS on Social Media



Discord Request:

<http://gars.org/discord>



Groups.io:

<http://gars.org/groups.io>



Visit GARS on Facebook:

<http://gars.org/facebook>



Follow GARS on X:

https://x.com/GARS_Hams



Join GARS on YouTube:

<http://gars.org/youtube>

GARS Mail Address:

GARS
P.O. Box 492531
Lawrenceville, GA 30049

Officers



Kevin Igarashi-Ball, President W4KIB



Alex Kowalchuk, Vice President AK4AM



Drew White, Secretary KQ4NUQ



Glen Wendt, Treasurer W3WWT



Kevin Scott, Program Manager K4GTR

Managers and Committee Chairs



Karen Albritton, Membership Chair KI4HPP



Dave Bruse, VE Team Leader W4DTR



David Adcock, Webmaster KA4KKF



Ralph Pickwick, Education Chair KJ4CNC



Earl Whatley, Apparel Manager AF4FG



Bob Hoffmann, GARzette Editor K4CQO



Eddie Foust, Repeater Chair WD4JEM



Mike Weathers, WAS / DXCC QSL Card Checker and Historian ND4V



Chuck McCord, Net Manager KK4TKJ



Steve Back, Technical / RFI Advisor WB2OGY



Dallas Mellichamp, Workshop Leader N4DDM



Sandy Jackson, Health and Wellbeing KJ4DRO



Kevin Igarashi-Ball, Multimedia Chair W4KIB



Dallas Mellichamp, Georgia QSO Chair N4DDM



Neil Derryberry, Elmer Manager WD4NET

Open Winter Field Day Chair, Field Day Chair, TechFest Chair

Directors and Trustees



Joe Biddle, AD4PZ



Kyle Albritton, W4KDA



John Davis, WB4QDX



Bill Cherepy, WB4WTN W4GR Trustee

GARS Meeting Minutes

GARS – MEETING 8/13/2024

President Kevin Igarashi-Ball (W4KIB) opened the meeting at 7:00 p.m. and closed the meeting at approximately 8:05p.m.

- New hams and visitors: Kevin (W4KIB)
 - First time visitors recognized.
- Introductions
- August birthdays listed, and congratulated.
- Treasurer Report: Glen (W3WWT)
- Membership: Kevin (W4KIB) Currently there are 347 members.
- Programs: Kevin (K4GTR)
 - August – DMR practical applications
 - September – Practical Basic Antennas
 - October – Favorite Websites / Show & Tell
 - Check the Site for more information.
- W4KIB introduced abbreviated committee reports for general meetings and welcome members to the executive meeting for full committee reports.
- Education: Ralph (KJ4CNC)
 - Technician HamCram September 28th and 29th. Preregistration is required
- Call for Volunteers (W4KIB)

- TechFest Chair
- Field Day Chair
- Stone Mountain Hamfest

- Other:

- Steve (WB2OGY): JOTA on October 19th

- Program: DMR practical applications(K4CQO)

Minutes provided by Kevin Igarashi-Ball (W4KIB)

Workshop Minutes - August 20, 2024

Number in Attendance: 13

Workshop Topic: DMR

Presenter: Bob Hoffmann K4CQO

Brief Summary: Bob K4CQO and Mark KN2TOD helped at least 4 set up their DMR radios. Other topics discussed were the November HamFest and Winter Field Day.

Elmers are always present at the GARS Workshops. Feel free to bring your questions to the Workshop and if your project is small enough to get to the meeting, let us know in advance via email so we can have tools, test gear, etc.



Events – GARS and others

ARRL CONTESTING INFO

From ARRL Contest Calendar

> For more information click the links <

2024 January

1 [Straight Key Night](#)

6 [Kid's Day](#)

6-7 [RTTY Roundup](#)

20-22 [January VHF Contest](#)

February

12-16 [School Club Roundup](#)

17-18 [International DX – CW](#)

March

2-3 [DX Contest – SSB](#)

April

21 [Rookie Roundup – Phone](#)

May

No planned contests

June

1-2 International Digital Contest

8-10 [June VHF](#)

15 [Kid's Day](#)

22-23 [Field Day](#)

July

13-14 [IARU HF World Championship](#)

August

3-4 [222 MHz and Up Dis Contest](#)

17-18 [10 GHz & Up – Round 1](#)

18 [Rookie Roundup – RTTY](#)

24-25 [EME - 2.3 GHz & Up](#)

September

14-16 [September VHF](#)

21-22 [EME - 2.3 GHz & Up – Rnd 2](#)

21-22 [10 GHz & Up – Wknd 1](#)

October

19-20 [EME - 50 to 1296 MHz](#)

21-25 [School Club Roundup](#)

November

2-4 [Nov. Sweepstakes - CW](#)

16-17 [EME - 50 to 1296 MHz](#)

16-18 [Nov. Sweepstakes - Phone](#)

December

6-8 [160 Meter](#)

14-15 [10 Meter](#)

22 [Rookie Roundup–CW](#)

For more information:

<http://www.arrl.org/contest-calendar>

HAMFEST CALENDAR

[Please confirm the status of a Hamfest before making plans to attend]

09/21/2024 - [Gadsden Hamfest](#)

Location: Gadsden, AL

Type: ARRL Hamfest

Sponsor: Gadsden Amateur Radio Club

Website: <http://Gadsdenhamfest.com>

10/19/2024 - [MARCIFEST 2024](#)

Location: Bradenton, FL

Type: ARRL Hamfest

Sponsor: Manatee Amateur Radio Club, Inc.

10/26/2024 - [Wiregrass ARC - Fall Tailgate](#)

Location: Headland, AL

Type: ARRL HamFest

Sponsor: Wiregrass ARC

Website: <http://w4dhn.org>

11/02/2024-11/03/2024 - [Stone Mountain HamFest](#)

Location: Gwinnett County Fair Grounds, Lawrenceville, GA

Type: ARRL State Convention

Sponsor: Alford Memorial Radio Club

Website: <https://stonemountainhamfest.com/>

11/09/2024 - [Montgomery Hamfest](#)

Location: Montgomery, AL

Type: ARRL HamFest

Sponsor: Montgomery Amateur Radio Club

Website: <http://w4ap.org>

11/23/2024 - [Flamingo Net Flea at U. of Miami](#)

Location: Coral Gables, FL

Type: ARRL Hamfest

Sponsor: Flamingo Net

Website: <http://FlamingoNet.8m.net>

12/13/2024 - 12/14/2024

[Tampa Bay Hamfest, ARRL West Central Florida Section Convention](#)

Location: Plant City, FL

Type: ARRL Convention

Sponsor: Florida Gulf Coast Amateur Radio Council

Website: <http://www.fgcarc.org/>

04/05/2025 - [Daleville Area Hamfest](#)

Location: Daleville, AL

Type: ARRL Hamfest

Sponsor: Daleville Area Amateur Radio Service

Website: <https://daleville.us/daleville-area-hamfest>

For more information: www.arrl.org/hamfests-and-conventions-calendar

When searching by division, remember some states adjacent to GA are in different divisions: Southeastern: GA, AL, FL Delta: TN Roanoke: NC, SC



GARS Events Calendar for 2024		GARS Recurring Calendar
TechFest Winter Field Day Dog Show Fundraiser Spring Technician HamCram Georgia QSO Party North metro area Fox Hunt Memorial Day Parade ARC/KARC Hamfest Field Day Summer General HamCram Fall Technician HamCram JOTA Stone Mt. Hamfest Holiday Party	January 13 2024 January 27-28 2024 March 5-6 2024 March 23-24, 2024 April 13-14 2024 April 2024 May 27 2024 June 1 2024 June 22-23 2024 July 27-28, 2024 September 28-29 2024 October 2024 November 2-3 2024 December 7 2024	<ul style="list-style-type: none">• 2nd Tuesday of the month at 7 pm (except December) Monthly Club Meeting 690 Airport Rd, Lawrenceville, GA 30046• 3rd Tuesday of the month at 7 pm (except December) Monthly Workshop 690 Airport Rd, Lawrenceville, GA 30046• 3rd Sunday of the Month at 2 pm GARS Ham Exam Session 690 Airport Rd Lawrenceville, GA 30046• Every Monday at 7:30 pm: GARS Want, Swap, Sell, and Information Net on the GARS 147.075 MHz repeater• 2nd and 4th Friday at 8:30 pm. GARS 440 Talk Net• Every Monday at 8:30 pm: ARES Training on the GARS 147.075 MHz repeater• Every Friday at 11:30 am, GARS Lunch at Chilli's• Every Saturday at 8:00 am GARS Breakfast at Cracker Barrel
GARS Calendar for September 2024		

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1	2	3	4	5	6	7
	7:30 – 8:00 PM 2M Net	7:00 PM Exec Meeting			11:30 AM Lunch at Chillis	8:00 AM Breakfast at Cracker Barrel
8	9	10	11	12	13	14
	7:30 – 8:00 PM 2M Net	7:00 PM Meeting EAA 690 Hangar			11:30 AM Lunch at Chillis 8:30 - 9:30 PM 70CM Talk Net	8:00 AM Breakfast at Cracker Barrel
15	16	17	18	19	20	21
2:00 PM GARS Ham Radio Exams, EAA 690 Hangar	7:30 – 8:00 PM 2M Net	7:00 PM Workshop Meeting EAA 690 Hangar			11:30 AM Lunch at Chillis	8:00 AM Breakfast at Cracker Barrel
22	23	24	25	26	27	28
	7:30 – 8:00 PM 2M Net				11:30 AM Lunch at Chillis 8:30 - 9:30 PM 70CM Talk Net	8:00 AM Breakfast at Cracker Barrel
29	30					
	7:30 – 8:00 PM 2M Net					



Local Ham Radio Exams & Meetings

GARS Ham Radio Exams

GARS Exam Sessions are held the 3rd Sunday of the month

Preregistration is **REQUIRED**

Doors open at 1:45pm, exams start promptly by 2:00pm

For more information and to preregister, please visit <https://gars.org/exams/>

GARS VE-Team

VEC: W5YI-VEC

EAA 690 Hangar

690 Airport Rd

Lawrenceville, GA 30046

GARS VE Team Leaders

E-mail: exams@gars.org.



July 2024 Results

The GARS VE Team exam session results from August 18th.

1 Upgrade to General:

- Ralph Martinez – KQ4UGY

6 New Technicians:

- NELSON M FONTAINE: KQ4USA
- Billy H Tyson: KQ4UTL
- LELIA H JENKINS: KC3ZPC
- Charles Hawkins: KQ4USL
- Zachary R Comstock: KQ4USK
- Samuel G Lent: KQ4VAB

Special thanks to the Volunteer Examiners who made this exam session possible:

W4DTR DAVID BRUSE

AB4QQ RUSSELL PREVOST

KM4SWL RICHARD KITZ

W4SHT Lynn Hatker

WB2OGY STEVEN BACK

KQ4DWZ Douglas Hooper

K4CQO Bob Hoffmann

Thanks & 73, Chuck McCord KK4TJK (Co-CVE)

Local Ham Radio Exams

In order to find an exam session near you, please visit

http://www.arrl.org/exam_sessions/.

Contact the information in the listing for further information.



Local Ham Radio Meetings

In order to find a local Ham Radio Club meeting near you, please visit

<http://www.arrl.org/find-a-club>.

Contact the club for meeting information.



Note: The Amateur Extra question pool expired on June 30, 2024, and all Amateur Extra exams will use the new question pool beginning on July 1, 2024. If you are studying for Amateur Extra, be sure your study guide is for the correct question pool (usually printed on the cover).

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editor@gars.org. Current ad prices per year are:

Business Card	\$50
1/4 page	\$125
1/2 page	\$150
Full page	\$200

For swap items, post and see items on GARS groups.io (<https://groups.io/g/GARS>).